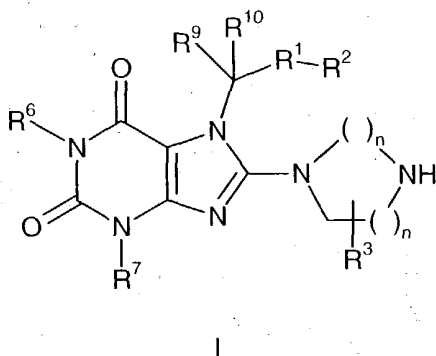


CLAIMS

1. A compound of formula I



5 wherein

each n is one or two independently

- R^1 is C=O; C=S; C₁-C₂ alkyl optionally substituted with one or more R⁴ independently; C₂ alkenyl substituted with one or more R⁴ independently; C₂ alkynyl; C₃-C₇ cycloalkyl optionally substituted with one or more R⁴ independently; C₃-C₇ cycloheteroalkyl optionally substituted with one or more R⁴ independently; aryl optionally substituted with one or more R⁴ independently; aryl C₁-C₃ alkyl optionally substituted with one or more R⁴ independently; heteroaryl optionally substituted with one or more R⁴ independently; heteroaryl C₁-C₃ alkyl optionally substituted with one or more R⁴ independently; perhalo C₁-C₁₀ alkyl; perhalo C₁-C₁₀ alkyloxy;

- R^2 is H; C₁-C₇ alkyl optionally substituted with one or more R⁴ independently; C₂-C₇ alkenyl optionally substituted with one or more R⁴ independently; C₂-C₇ alkynyl optionally substituted with one or more R⁴ independently; C₃-C₇ cycloalkyl optionally substituted with one or more R⁴ independently; C₃-C₇ cycloheteroalkyl optionally substituted with one or more R⁴ independently; aryl optionally substituted with one or more R⁴ independently; aryl C₁-C₃ alkyl optionally substituted with one or more R⁴ independently; heteroaryl C₁-C₃ alkyl optionally substituted with one or more R⁴ independently; heteroaryl optionally substituted with one or more R⁴ independently, -SH; -SR⁵; -SOR⁵; -SO₂R⁵; -CHO; -CH(OR⁵)₂; carboxy; -CO₂R⁴; NHCONNH₂; -NHCSNH₂; -NHCONH₂; -NHCOR⁴; -NHSO₂R⁵; -O-CO-(C₁-C₅) alkyl optionally substituted with one or more R⁴ independently; cyano; nitro; halogen; hydroxy; perhalo C₁-C₇ alkyl; perhalo C₁-C₇ alkyloxy; -SO₂NH₂; -SO₂NH(R⁵); -SO₂(R⁵)₂; -CONH₂; -CSNH₂; -CON₂H₃; -CONH(R⁵); -CON(R⁵)₂; C₁-C₁₀

alkyloxy optionally substituted with R^4 independently; C_2 - C_{10} alkenyloxy optionally substituted with R^4 ; C_2 - C_{10} alkynyloxy optionally substituted with R^4 independently; aryloxy optionally substituted with R^4 independently; heteroaryloxy optionally substituted with R^4 independently;

5

R^3 is H; C_1 - C_{10} alkyl optionally substituted with one or more R^4 independently; C_2 - C_{10} alkenyl optionally substituted with one or more R^4 independently; C_2 - C_{10} alkynyl optionally substituted with one or more R^4 independently; C_3 - C_7 cycloalkyl optionally substituted with one or more R^4 independently; C_3 - C_7 cycloheteroalkyl optionally substituted with one or
 10 more R^4 independently; aryl optionally substituted with one or more R^4 independently; aryl C_1 - C_3 alkyl optionally substituted with one or more R^4 independently; heteroaryl C_1 - C_3 alkyl optionally substituted with one or more R^4 independently; heteroaryl optionally substituted with one or more R^4 independently; C_1 - C_{10} alkyl-NH(CH₂)₁₋₄NH-aryl optionally substituted with one or more R^4 independently; C_1 - C_{10} alkyl-NH(CH₂)₁₋₄NH-heteroaryl
 15 optionally substituted with one or more R^4 independently; C_1 - C_{10} alkyl-O(CH₂)₁₋₄NH-aryl optionally substituted with one or more R^4 independently; C_1 - C_{10} alkyl-O(CH₂)₁₋₄NH-heteroaryl optionally substituted with one or more R^4 independently; C_1 - C_{10} alkyl-O(CH₂)₁₋₄O-aryl optionally substituted with one or more R^4 independently; C_1 - C_{10} alkyl-O(CH₂)₁₋₄O-heteroaryl optionally substituted with one or more R^4 independently; C_1 - C_{10} alkyl-S(CH₂)₁₋₄NH-aryl optionally substituted with one or more R^4 independently; C_1 - C_{10} alkyl-S(CH₂)₁₋₄NH-heteroaryl optionally substituted with one or more R^4 independently; C_1 - C_{10} alkyl-S(CH₂)₁₋₄S-aryl optionally substituted with one or more R^4 independently; C_1 - C_{10} alkyl-S(CH₂)₁₋₄S-heteroaryl optionally substituted with one or more R^4 independently; C_1 - C_{10} alkyl-O- C_1 - C_5 alkyl optionally substituted with one or more R^4 ; -NHCOR⁴; -NH₂SO₂R⁵; -O-CO-(C_1 - C_5) alkyl optionally substituted with one or more R^4 independently; -SH; -SR⁵; -SOR⁵; -SO₂R⁵; -CHO; -CH(OR⁵)₂; carboxy; cyano; nitro; halogen; hydroxy; -SO₂NH₂; -SO₂NH(R⁵); -SO₂N(R⁵)₂; -CONH₂; -CONH(R⁵); -CON(R⁵)₂; -CSNH₂; -CONHNH₂; -CO₂R⁴; -NHCNHNH₂; -NHCSNH₂; -NHCONH₂;

30 R^4 is C_1 - C_{10} alkyl optionally substituted with one or more R^8 independently; C_2 - C_{10} alkenyl optionally substituted with one or more R^8 independently; C_2 - C_{10} alkynyl optionally substituted with one or more R^8 independently; C_3 - C_7 cycloalkyl optionally substituted with one or more R^8 independently; C_3 - C_7 cycloheteroalkyl optionally substituted with one or more R^8 independently; aryl optionally substituted with one or more R^8 independently;
 35 heteroaryl optionally substituted with one or more R^8 independently; amino; amino

- substituted with one or more C₁-C₁₀ alkyl optionally substituted with one or more R⁸;
 amino substituted with one or two aryl optionally substituted with one or more R⁸
 independently; heteroaryl optionally substituted with one or more R⁸ independently; =O;
 =S; -CO-R⁵; -COOR⁵; -O-CO-(C₁-C₅) alkyl optionally substituted with one or more R⁸
 5 independently; NH(CH₂)₁₋₄NH-aryl; NH(CH₂)₁₋₄NH-heteroaryl; -NHCOR⁵; -SOR⁵; SO₂R⁵;
 carboxy; cyano; N-hydroxyimino; nitro; halogen; hydroxy; perhalo C₁-C₁₀ alkyl; perhalo C₁-
 C₁₀ alkyloxy; -SH; -SR⁵; -SO₃H; -SO₃R⁵; -SO₂R⁵; -SO₂NH₂; -SO₂NH(R⁵); -SO₂N(R⁵)₂; -
 CONH₂; -CONH(R⁵); -CON(R⁵)₂; C₁-C₁₀ alkyloxy optionally substituted with one or more
 R⁸ independently; C₂-C₁₀ alkenyloxy optionally substituted with one or more R⁸
 10 independently; C₂-C₁₀ alkynyloxy optionally substituted with one or more R⁸
 independently; aryloxy optionally substituted with one or more R⁸ independently;
 heteroaryloxy optionally substituted with one or more R⁸ independently;
 and two R⁴ attached to the same carbon atom may form a spiroheterocyclic system,
 preferably hydantoin; thiohydantoin; oxazolidine-2,5-dione;
- 15 R⁵ is C₁-C₁₀ alkyl optionally substituted with one or more R⁸ independently; C₂-C₁₀ alkenyl
 optionally substituted with one or more R⁸ independently; C₂-C₁₀ alkynyl optionally
 substituted with one or more R⁸ independently; C₃-C₇ cycloalkyl optionally substituted with
 one or more R⁸ independently; C₃-C₇ cycloheteroalkyl optionally substituted with one or
 20 more R⁸ independently; aryl optionally substituted with one or more R⁸ independently; aryl
 C₁-C₅ alkyl optionally substituted with one or more R⁸ independently; heteroaryl optionally
 substituted with one or more R⁸ independently; heteroaryl C₁-C₅ alkyl optionally
 substituted with one or more R⁸ independently;
- 25 R⁶ is H; C₁-C₁₀ alkyl optionally substituted with one or more R⁴ independently; C₂-C₁₀
 alkenyl optionally substituted with one or more R⁴ independently; C₂-C₁₀ alkynyl optionally
 substituted with one or more R⁴ independently; C₃-C₇ cycloalkyl optionally substituted with
 one or more R⁴ independently; C₃-C₇ cycloheteroalkyl optionally substituted with one or
 more R⁴ independently; aryl optionally substituted with one or more R⁴ independently;
 30 heteroaryl optionally substituted with one or more R⁴ independently;
- R⁷ is H; C₁-C₁₀ alkyl optionally substituted with one or more R⁴ independently; C₂-C₁₀
 alkenyl optionally substituted with one or more R⁴ independently; C₂-C₁₀ alkynyl optionally
 substituted with one or more R⁴ independently; C₃-C₇ cycloalkyl optionally substituted with
 35 one or more R⁴ independently; C₃-C₇ cycloheteroalkyl optionally substituted with one or

more R⁴ independently; aryl optionally substituted with one or more R⁴ independently;
heteroaryl optionally substituted with one or more R⁴ independently;

- R⁸ is H, amidoxime; nitro, tetrazole; pentafluorophenyl; -CH₂OH; -CHO; -C(OCH₃)₂; -
5 COCH₃; -CF₃; -CCl₃; -OCF₃; -OCH₃; -CN; -CO₂H; -CO₂CH₃; -CONH₂; -CSNH₂; -CON₂H₃; -
SO₃H; -SO₂NH₂; -SO₂NHCH₃; -SO₂N(CH₃)₂; -SO₂ (1-piperazinyl); -SO₂ (4-methylpiperazin-
1-yl); -SO₂ (pyrrolidin-1-yl); -SO₂ (piperidin-1-yl); -SO₂ (morpholin-4-yl); N-hydroxyimino; -
NH₂; -NHCH₃; -N(CH₃)₂; -NHCNHNH₂; -NHCNHNHCH₃; -NHCSNH₂; -NHCSNHCH₃; -
NHCONH₂; -NHCONHCH₃; -NHCOCH₃; -NHSO₂CH₃; piperazinyl; morpholin-4-yl;
10 thiomorpholin-4-yl; pyrrolidin-1-yl; piperidin-1-yl; halogen; -OH; -SH; -SCH₃; -aminoacetyl;
-OPO₃H; -OPO₂OCH₃; -PO₃H₂; -PO(OCH₃)₂; PO(OH)(OCH₃);

R⁹ is H; halogen; C₁-C₁₀ alkyl optionally substituted with one or more R⁴ independently

- 15 R¹⁰ is H; halogen;

or, R⁹ and R¹⁰ may be connected to form a cyclopropyl ring;

or a salt thereof with a pharmaceutically acceptable acid or base;

20

with the exception of the following compounds:

- 1,3-dimethyl-7-(2-oxo-propyl)-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
1,3,1',3',7'-pentamethyl-8-piperazin-1-yl-3,7,3',7'-tetrahydro-7,8'-methanediyl-bis-purine-
2,6-dione,
25 3,4,5-trimethoxy-benzoic acid 2-(1,3-dimethyl-2,6-dioxo-8-piperazin-1-yl-1,2,3,6-
tetrahydro-purin-7-yl)-ethyl ester,
7-[2-Hydroxy-3-(4-methoxy-phenoxy)-propyl]-3-methyl-8-piperazin-1-yl-3,7-dihydro-
purine-2,6-dione,
7-[2-hydroxy-2-(4-nitro-phenyl)-ethyl]-3-methyl-8-piperazin-1-yl-3,7,8,9-tetrahydro-purine-
30 2,6-dione,
7-Benzyl-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
7-(4-Chloro-benzyl)-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
7-(2-Chloro-benzyl)-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
7-Ethyl-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
35 3-Methyl-8-piperazin-1-yl-1,7-dipropyl-3,7-dihydro-purine-2,6-dione,

- 3-Methyl-7-(3-methyl-butyl) -8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
7-Butyl-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
3-Methyl-7-(3-phenyl-propyl) -8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
7-But-2-enyl-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
5 7-(3-Chloro-but-2-enyl) -3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
7-Heptyl-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
3-Methyl-7-(1-phenyl-ethyl) -8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
3-Methyl-7-(3-methyl-benzyl) -8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
3-Methyl-7-propyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione, and
10 3-Methyl-7-pentyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione.

2. A pharmaceutical composition comprising at least one compound according to claim 1 together with a pharmaceutically acceptable carrier or diluent.